WE CLAIM:

1. A portable concave reflector assembly comprising:

(a) a hub member defining a hub axis;

(b) at least two blade members radiating from said hub member, with each one of said blade members being identical in size and shape to each other one of said blade members;

(c) a hub interlocking means for holding each of said blade members in selectively locked and secured relation with respect to said hub member; and

(d) a blade interlocking means for holding each of said blade members in selectively locked and secured relation with respect to each adjacent one of said blade members;

wherein said hub member and said blade members together form a continuous reflective front face throughout three hundred and sixty degrees about said hub axis, and wherein said portable concave reflector assembly has a concave dish-shaped profile for directing substantially parallel waves of incident radiant energy to a general focal area.

2. A portable concave reflector assembly according to claim 1, further comprising a focal area support means for holding and supporting an item to be heated in said general focal area.

3. A portable concave reflector assembly according to claim 1, wherein said hub interlocking means is adapted for selective rotation of said hub member about said hub axis in a first substantially circumferential direction relative to said blade members from an unlocked hub configuration towards a locked hub configuration; in said unlocked hub configuration, each of said blade members is held in selectively disengagable relation with respect to said hub member; and in said locked hub configuration, each of said blade members is held in locked and secured relation with respect to said hub member.

4. A portable concave reflector assembly according to claim 3, wherein said hub interlocking means comprises:

(a) at least two hub connecting tabs extending from a perimeter hub portion of said hub member in said first substantially circumferential direction;

(b) at least two mating hub connecting slots formed at least one each in a narrow end portion of each respective one of said blade members;

wherein in said unlocked hub configuration, one each of said hub connecting tabs selectively engages in unobstructed through-passing relation a respective one of said mating hub connecting slots; and wherein in said locked hub configuration, said hub connecting tabs are

selectively locked and secured in obstructed relation with said mating hub connecting slots.

5. A portable concave reflector assembly according to claim 4, wherein each of said hub connecting tabs comprises a substantially L-shaped hub connecting tab, each said L-shaped hub connecting tab firstly extending from said perimeter hub portion in a rearward direction and secondly extending in said first substantially circumferential direction.

6. A portable concave reflector assembly according to claim 5, wherein said at least two blade members comprise nine blade members, wherein said at least two hub connecting tabs comprise nine hub connecting tabs, and wherein said at least two mating hub connecting slots comprise nine mating hub connecting slots formed one each in said narrow end portion of each said respective one of said blade members.

7. A portable concave reflector assembly according to claim 6, wherein each of said hub connecting slots is formed in a recessed hub overlapping portion that is shaped in said narrow end portion of each said respective one of said blade members.

8. A portable concave reflector assembly according to claim 7, wherein said first substantially circumferential direction comprises a substantially counter-clockwise direction about said hub axis when said hub member is viewed from said rearward direction.

9. A portable concave reflector assembly according to claim 3, wherein said hub interlocking means further comprises a gripping means for gripping said hub member during rotation of said hub member relative to said blade members as aforesaid.

10. A portable concave reflector assembly according to claim 9, wherein said hub member has a central hub portion, and wherein said gripping means comprises at least two grippable member portions shaped and formed in a rear face of said central hub portion.

11. A portable concave reflector assembly according to claim 10, wherein said at least two grippable member portions comprise nine grippable member portions.

12. A portable concave reflector assembly according to claim 1, wherein said blade interlocking means is adapted for selective movement of each respective one of said blade members in a first substantially radial direction relative

to each said adjacent one of said blade members from an unlocked blade configuration towards a locked blade configuration; in said unlocked blade configuration, said respective one of said blade members is held in selectively disengagable relation with respect to said adjacent one of said blade members; and in said locked blade configuration, said respective one of said blade members is held in locked and secured relation with respect to said adjacent one of said blade members.

13. A portable concave reflector assembly according to claim 12, wherein said blade interlocking means comprises:

(a) at least two blade connecting tabs extending from a first side portion of each said respective one of said blade members, said blade connecting tabs extending in said first substantially radial direction;

(b) at least two mating blade connecting slots formed in a second side portion of each said respective one of said blade members;

wherein in said unlocked blade configuration, said blade connecting tabs engage in selectively unobstructed through-passing relation respective ones of said mating blade connecting slots formed in said adjacent one of said blade members; and wherein in said locked blade configuration, said blade connecting tabs are selectively locked and secured in obstructed relation with said mating

blade connecting slots formed in said adjacent one of said blade members.

14. A portable concave reflector assembly according to claim 13, wherein each of said blade connecting tabs comprises a substantially L-shaped blade connecting tab, each said L-shaped hub connecting tab firstly extending from said first side portion in a rearward direction and secondly extending in said first substantially radial direction.

15. A portable concave reflector assembly according to claim 14, wherein said at least two blade connecting tabs comprise five blade connecting tabs, and wherein said at least two mating blade connecting slots comprise five blade connecting slots formed five each in said second side portion of each said respective one of said blade members.

16. A portable concave reflector assembly according to claim 15, wherein said blade connecting slots are formed five each in a recessed blade overlapping portion that is shaped in said second side portion of each said respective one of said blade members.

17. A portable concave reflector assembly according to claim 16, wherein said first substantially radial direction comprises a substantially central direction.

18. A portable concave reflector assembly according to claim 1, wherein said reflector assembly further comprises a mounting means for securely mounting said reflector assembly relative to an incoming source of radiant energy.

19. A portable concave reflector assembly according to claim 18, wherein said hub member has a central hub portion, and wherein said mounting means comprises a tripod mounting aperture shaped and formed in a rear face of said central hub portion for securely mounting said portable concave reflector assembly on a tripod.

20. A portable concave reflector assembly according to claim 1, wherein said reflector assembly further comprises a directional guide means mounted on said front face for selectively and substantially aligning said reflector assembly with an incoming source of radiant energy.

21. A portable concave reflector assembly according to claim 20, wherein said hub member has a central hub portion, wherein said directional guide means comprises an elongate directional guide member rigidly mounted on a front hub face of said central hub portion, extending substantially normal thereto and defining a guide axis in substantially coaxial relation to said hub axis, and wherein, when said radiant energy comprises visible light, said reflector

assembly is substantially aligned with said incoming source of radiant energy as aforesaid by selectively inclining said front face of said reflector assembly such that said elongate directional guide member does not cast a shadow in any appreciable direction.

22. A portable concave reflector assembly according to claim 1, wherein said concave dish-shaped profile of said reflector assembly is substantially spherical in shape.

23. A portable concave reflector assembly according to claim 1, wherein said hub member and said blade members of said portable concave reflector assembly may be constructed from metals, plastics, and other suitably light-weight materials.

24. A portable concave reflector assembly according to claim 1, wherein said concave dish-shaped profile is adapted for directing substantially parallel waves of incident radiant energy from said general focal area.